TRINTEK ENERGY CONSULTING, INC.

May 11, 2005

Mr. Harry Stoller
Illinois Commerce Commission
Springfield, Illinois

Dear Mr. Stoller,

Re: Proposed Terms For Wind Product, Page 12, ComEd RPS Presentation

These comments are related to the proposed wind energy contracting terms ComEd introduced in their May 10th presentation to the Commission. I have included comments on proposed annual capacity factor targets, the magnitude of higher energy price impacts due to 15-year contracts and the possible limits on economic viability of the Illinois wind resource base that may result from 15-year contracts as opposed to 20-year terms.

Proposed Annual Capacity Factor Target of 32% And Supplier Penalties

ComEd has proposed targeting an annual capacity factor for Illinois wind farms to run 32% of the hours in a year, with penalties applied to suppliers/developers when the wind does not blow at least 24% of the time.

For explanatory and background purposes, the annual capacity factor for a wind farm is technically determined by and is primarily a function of the quality of the wind resource at a particular wind project site. For example, in the poorest wind regimes, (Class 1 and 2 winds), the lower wind velocities and less sustained wind durations would likely be characterized by capacity factors less than 18-20% and could fall as low as 10%. A typical Class 3 or Class 4 wind farm such as we will have in Illinois would likely be characterized by capacity factors in the 25-35% range, implying it will be able to deliver energy intermittently when the wind blows 25-35% of the hours in a given year. And only those sites with the most excellent wind resources (Classes 5, 6, and 7) would have capacity factors of 40%+ range. The annual wind capacity factor is mainly a function of the natural wind resource; and therefore, the number of hours a project can operate and supply energy in a year is physically dictated by “Mother Nature”. Although the “technical” capacity factor at any given wind site is a function of the natural wind resource at that site, and beyond the influence and control of either the developer/supplier or the contracting purchaser/utility, the good news is that it can be fairly well bracketed at each site via detailed wind measurement studies and data analysis. Each wind project site will usually have made a long-term wind measurement study which will define the strength/velocity, statistical distribution, and duration of the wind resources at that site.

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In my opinion, an average Class 3 site in Illinois will have an annual capacity factor of somewhere in the 25-28% range. A Class 4 site might be able to achieve ComEd's proposed 32% target; however, it is possible that some of the Class 3+ and Class 4 sites can't meet or exceed ComEd's proposed 32% target. Even though there is generally a good correlation between wind class and annual capacity factor, it doesn't necessarily always follow that high velocity winds are always sustained winds of lengthy duration year round. Setting a target of 32% with penalties for 24% would serve to unnecessarily penalize the economic viability of the Class 3 resource base, and may not even be technically possible for some Class 3+ and Class 4 sites.

My suggestion to the Commission is that targeted thresholds for supply penalties based on annual capacity factors be left to the supplier and purchaser to negotiate based upon the technical merits of the particular wind site in question which will have been documented by a site specific wind measurement study defining its unique potential annual capacity factor. The supplier and purchaser can also negotiate at what annual capacity factor below the "technical" threshold, the actions and performance of the supplier/developer should be penalized regarding the things which are within the supplier's sphere of influence and control such as proper project maintenance. My point is that such penalty threshold provisions for project parameters largely controlled by nature should not be locked into or arbitrarily set.

Proposed 15 Year Term Length for PPA's

ComEd has proposed a term of 15 years for the length of PPA's to be offered to wind developers. I wish to point out that it is a fact that 20 year PPA's will improve the ability of developers to finance and service the debt needed to construct wind projects. It is also a fact that for a given economic return, the developer can offer the purchaser of power a lower power purchase price with a 20-year contract versus a 15-year contract. If a developer has to pay back the debt for a project in 15 years, the offer or ask price for sale of energy to the utility will have to be higher than if there are 20 years to pay off debt. I believe many participants in the RPS process would agree that Illinois consumers are likely to better served by 20-year contracts than 15-year contracts.

In ComEd's previous presentations, it has mentioned that the Commission will need to find that the rationale for renewables in the State's generation portfolio depends on creating a long-term supply hedge that will benefit the consumer. It would seem that this is certainly a consistent reason to consider the benefit of 20-year contracts. Since ComEd has requested cost recovery on these contracts be approved, it is not apparent to me why ComEd shouldn't be more supportive of longer-term contracts. I suppose the argument can be made that it might be better to renegotiate 15 years from now instead of in 20 years, because one may get better pricing if energy prices are lower 15 years from now. But my point is, that there is an upfront cost for that strategy today, and there is no guarantee prices will be lower in the future. In fact, it seems very possible they may be higher; hence the supply hedge rationale. The longer-term contract would also seem to be consistent with ComEd's proposal to have suppliers bid "back-end loaded" pricing structures to mitigate near term rate impacts to consumers. The extra 5 years would also allow for more flexibility in spreading out or amortizing the "back-end" loaded pricing.

Example of Price Difference For 15 Vs. 20-Year Term:

To give the Commission an idea what the likely price difference is on a Class 3 wind site for 20 year contracts versus 15 year contracts, I have run an economic model which assumes a project size of about 50 Mw's, constant costs of $1500/KW (all-in), the availability of the PTC, industry standard project financing terms, and an annual project capacity factor of 28%. The resulting power price required to give the same project internal rate of return in both cases is higher by about 0.5 cents/kwh for a 15-year contract vs. a 20-year contract. This extra cost seems significant when compared to avoided costs, and worth eliminating with longer-term contracts. I'm sure that this analysis can be independently confirmed by any energy industry consultant, wind industry developers, and has likely already been performed by the utilities themselves.

Possible Effect of Limiting Available Resource Base and Supply of Wind Energy

In addition to pricing, other market impacts, which I believe the Commission should consider, are:

1) That 15-year or lower contract term lengths could serve to eliminate some of the wind resource base in Illinois. Commissioner Wright said very clearly that he is somewhat skeptical that a very robust wind resource base exists in Illinois to start with. Whatever that resource base is, it is a fact that more of the wind resource base in Illinois would be economically viable with 20-year contracts than with 15-year contracts. It is very possible that only the very best Class 4 and Class 3+ sites in Illinois will have the economics to go forward with 15-year contracts. With 20-year contracts, some of the Class 3 wind resource in the State might be economic or could later at least have some chance to become economic if recent turbine price increases do not persist into the future.

2) Smaller sized projects of 20-30 Mw's in size and even farmer and community owned projects of from one to five wind turbines will likely not have as much of chance of succeeding with 15 year contracts as opposed to 20 year contracts, which again has the effect of limiting the resource base and the supply of economically viable wind, and in a de facto way, may make Illinois more of a "Big Wind" market, shutting out smaller developers, farmers, and communities who want to participate.

I believe ComEd stated that part of their rationale for 15 year terms as opposed to 20 year terms was to make sure that only the best and most economically viable projects succeeded or came forward first. I can think of many reasons why this could either be a good or a poor rationale, depending on who the affected stakeholders are, but my primary concern is that once a 15 year term is put into effect, that it becomes a "contracting precedent" which then stays in place, possibly limiting the future economic resource base of the State. Mr. Mike Robinson from MISO testified that about 835 Mw's of projects are in the interconnection queue in Illinois right now. My assumption in general is that these represent the largest 100, 200, and 400 MW sized projects in the State which have Class 3+ and Class 4 wind sites. My question is what happens once these initial projects are built?

If the technical resource base is first cherry picked for the largest and best quality wind projects, and then the remainder of the technical resource base of Class 3 wind is limited by economic viability due to 15 year contracts, then it seems possible that the RPS goal

may not be met due to a lower supply of renewable wind energy, and any utility who does not advocate longer term contracts (which would expand the economic resource base) could ironically enough actually end up paying penalties versus purchasing power. Of course the Class 3 resource base could be made economic on 15-year contracts by paying a higher price for it, but this does not seem like a desired outcome either.

Dennis Elliot of the NREL has stated there are about 8,870 prospective Mw's of Class 3+ and Class 4 wind that is in developable locations in the State, and seemed to further indicate that somewhere between 3,000 Mw's and the 8,870 Mw's may be economically viable as opposed to just the technical Mw's which exist in the State. With this in mind, I would like to point out that a decent Class 3 project which is closer to transmission could be more economic and result in a lower power purchase price than a Class 3+ or Class 4 site with a 15 year contract, presuming the Class 3 site could be contracted for 20 years as opposed to 15 years.

Another valid consideration when thinking about contract provisions that affect economic viability and can either result in a more or less robust and diverse resource base is the impact on jobs, and the local economies in the State. More successful projects in the State will mean more prosperity for the State.

PPA Pricing Prior to 1/1/2007

With regard to ComEd's comments that they will pay only avoided costs prior to 1/1/2007 unless the ICC approves recovery for costs prior to that date, I do not think this is a very big issue, but offer the following comments. To the extent that individual wind turbines have been commissioned and tested and declared to be accepted as commercially operating installations with availabilities of say at least 85%, I believe that developers would desire to be paid the renewable price increment above the avoided cost, and will take any shortfall in 2006 pricing into account in their bids. Therefore if the Commission can find a practical way to approve cost recovery for such power sold prior to 1/1/2007, which on larger 100-400 MW wind farms could be a significant amount of MWh, it would seem logical that supplier bids would result in a lower overall cost of purchased power. I believe developers will turn in slightly higher bids if they know they could be penalized with avoided cost pricing on large numbers of turbines for a 2-3 month period during 2006. Again, this is probably more of a timing and short term implementation issue that is not ultimately in the overall scope of things that big an issue. My only point is that early approval of cost recovery would be more optimal and would likely result in lower long term bids by suppliers, if it can be achieved.

In closing, let me say I greatly appreciated Ameren's proposal to hold collaborative meetings with the renewables industry and other stakeholders in the State to better understand and define fair and equitable contracting provisions for long term supply contracts, the RFP process, and to have an open exchange of information and learning prior to filing plans with the Commission. I would bet that this is the right way to insure that detailed contract provisions, the RFP process, and the RPS implementation are a long-term success for all stakeholders.

Best Regards,

Tim N. Libson
Principal Consultant